

* SWBAT use the momentum equation to solve word problems

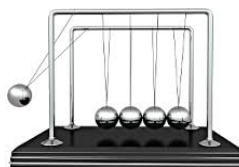
Sep 6-2:31 PM

Welcome!!!

H. Leslie Grebe

* Pick up:

- whiteboard, marker, eraser
- slip of paper (for later)



SECA Physics
Monday 7 December 2015

Opening Question:

Where do you hear the word "momentum" in everyday life?

SPORTS
MOTIVATION
SCHOOL WORK

Centering...

Sep 7-7:04 AM

CPP:

Momentum is...

INERTIA IN MOTION

MOMENTUM = MASS \times VELOCITY

$$\text{MOM.} = m \cdot v$$

Bowling ball has a mass of 3 kg and is rolling at 1 m/s. What is its momentum?

$$\text{mom.} = m \cdot v = 3 \text{ kg} \cdot 1 \frac{\text{m}}{\text{s}} = 3 \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

A ping pong ball has a much smaller mass, let's say 0.01 kg (that's 10 grams). If it's going 100 m/s, what is its momentum?

$$\text{mom} = m \cdot v = 0.01 \text{ kg} \times 100 \frac{\text{m}}{\text{s}} = 1 \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

A SOFT BALL GO 10,000 m/s AND HAS A MOMENTUM OF 5,000 $\frac{\text{kg} \cdot \text{m}}{\text{s}}$. WHAT IS ITS MASS?

$$m = \frac{\text{mom}}{v} = \frac{5,000 \frac{\text{kg} \cdot \text{m}}{\text{s}}}{10,000 \frac{\text{m}}{\text{s}}} = 0.5 \text{ kg}$$



Truck: 1000 kg sitting still

Skateboard: 1 kg rolling at 5 m/s

Which has more mass?

TRUCK

Which has more velocity?

SK.

Which has more momentum?

SKATEBOARD

Dec 7-7:51 AM

Daisy Cutter

OAS Show-offs #14

(Nova DVD)

What is a physics term used to explain it?

Definition?



How is this connected to ideas that we've encountered?

Dec 5-9:21 AM

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. What is the momentum of a bowling ball that has a mass of 3 kg and is rolling at 1 m/s?

$$3 \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

2. Which has more momentum: A large truck sitting still or a skateboard moving slowly?

3. Bernie, whose mass is 70 kg, leaves a ski jump with a velocity of 20 m/s. What is Bernie's momentum?

$$1400 \frac{\text{kg} \cdot \text{m}}{\text{s}}$$

Dec 2-7:55 AM